

EXHIBIT #9

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

**Sixth
Edition**

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On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)

Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; U.S. Air Force *Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Stunfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Sixth Edition

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4. A telescope equipped with an eyepiece designed for autocollimation. { 'd-ō-kāl-ə-mād-ər }

autoconsequent falls [HYD] Waterfalls in streams carrying a heavy load of calcium carbonate in solution which develop at particular sites along the stream course where warming, evaporation, and other factors cause part of the solution load to be precipitated. { 'd-ō-kān-sə-kwənt 'fōlz }

autoconsequent stream [HYD] A stream in the process of building a fan or an alluvial plain, the course of which is guided by the slopes of the alluvium the stream itself has deposited. { 'd-ō-kān-sə-kwənt 'strēm }

autoconvection [METEOROL] The phenomenon of the spontaneous initiation of convection in an atmospheric layer in which the lapse rate is equal to or greater than the autoconvective lapse rate. { 'd-ō-kən'vek-shən }

autoconvection gradient See autoconvective lapse rate. { 'd-ō-kən'vek-shən 'grād-ē-ənt }

autoconvective instability See absolute instability. { 'd-ō-kən'vek-tiv 'in-stə'bīl-əd-ē }

autoconvective lapse rate [METEOROL] The largely hypothetical environmental lapse rate of temperature in an atmosphere in which the density is constant with height (homogeneous atmosphere); 3°C per 100 meters in dry air. Also known as autoconvection gradient. { 'd-ō-kən'vek-tiv 'lāps-rāt }

autocopulation [INV ZOO] Self-copulation; sometimes occurs in certain hermaphroditic worms. { 'd-ō-kāp-yə'lā-shən }

autocorrelation [ELECTR] A technique used to detect cyclic activity in a complex signal. [STAT] In a time series, the relationship between values of a variable taken at certain times in the series and values of a variable taken at other, usually earlier times. { 'd-ō-kār-ə'lā-shən }

autocorrelation function [MATH] For a specified function $f(t)$, the average value of the product $f(t)f(t - \tau)$, where τ is a time-delay parameter; more specifically, the limit as T approaches infinity of $1/(2T)$ times the integral from $-T$ to T of $F(f)f(t - \tau) dt$. { 'd-ō-kār-ə'lā-shən 'fʌŋk-shən }

autocorrelator [ELECTR] A correlator in which the input signal is delayed and multiplied by the undelayed signal, the product of which is then smoothed in a low-pass filter to give an approximate computation of the autocorrelation function; used to detect a nonperiodic signal or a weak periodic signal hidden in noise. { 'd-ō-kār-ə'lād-ər }

autocrine signaling [PHYSIO] Signaling in which cells respond to substances that they themselves release. { 'd-ō-krīn 'sig-nəl-īŋ }

autodecrement addressing [COMPUT SCI] An addressing mode of minicomputers in which the register is first decremented and then used as a pointer. { 'd-ō-dēk-rə-mənt ə'dres-īŋ }

autodeme [ECOL] A plant population in which most individuals are self-fertilized. { 'd-ō-dēm }

autodetachment [ATOM PHYS] A process in which one of the excited electrons in a doubly excited state of a negative ion is ejected, while the other excited electron drops back to a lower energy level. { 'd-ō-dē'təch-mənt }

auto dial [COMMUN] The feature of a modem that automatically opens a telephone line and dials the telephone of a receiving computer to establish a connection. { 'd-ō-dīl }

autodyne circuit [ELECTR] A circuit in which the same tube elements serve as oscillator and detector simultaneously. { 'd-ō-dīn 'sər-kət }

autodyne reception [COMMUN] System of heterodyne reception through the use of a device which is both an oscillator and a detector. { 'd-ō-dīn rī'sep-shən }

autoecious [BOT] See autoicous. [MYCOL] Referring to a parasitic fungus that completes its entire life cycle on a single host. { 'ō'tēsh-əs }

autoecology [ECOL] The study of how a particular species responds to the environment. Also spelled autecology. { 'd-ō-dī-kāl-ə-jē }

autoeroticism See autoerotism. { 'd-ō-d-ə'rād-ə-siz-əm }

autoerotism [PSYCH] Sexual arousal or gratification using one's own body. Also known as autoeroticism. { 'd-ō-d-er-ə-tiz-əm }

autofocus rectifier [OPTICS] A precise, vertical photoenlarger which permits the correction of distortion in an aerial negative caused by tilt. { 'd-ō-d-fō-kəs 'rek-tə-fī-ər }

autofrettage [ENG] A process for manufacturing gun barrels; prestressing the metal increases the load at which its permanent deformation occurs. { 'd-ō-fred-ij }

autogamy [BIOL] A process of self-fertilization that results in homozygosis; occurs in some flowering plants, fungi, and protozoans. { 'd-ō-gam-ē }

autogenesis See abiogenesis. { 'd-ō-jen-ə-səs }

autogenetic drainage [HYD] A self-established drainage system developed solely by headwater erosion. { 'd-ō-jə'nəd-ik 'drān-ij }

autogenetic topography [GEOL] Conformation of land due to the physical action of rain and streams. { 'd-ō-jə'nəd-ik tə'pāg-rə-fē }

autogenous [BIOL] Originating or derived from sources within the same individual. [SCI TECH] Self-generated; produced without external influence. { 'd-ō-tāj-ə-nəs }

autogenous control [MOL BIO] Regulation of gene expression by a product of the gene itself that either inhibits or enhances the gene's activity. { 'd-ō-tāj-ə-nəs kən'trōl }

autogenous electrification [PHYS] The process by which net charge is built up on an object, such as an airplane, moving relative to air containing dust or ice crystals; produced by frictional effects (triboelectrification) accompanying contact between the object and the particulate matter. { 'd-ō-tāj-ə-nəs i'lek-trə-fə'kā-shən }

autogenous grinding [MECH ENG] The secondary grinding of material by tumbling the material in a revolving cylinder, without balls or bars taking part in the operation. { 'd-ō-tāj-ə-nəs 'grīnd-īŋ }

autogenous healing [ENG] A natural process of closing and filling cracks in concrete or mortar while it is kept damp. { 'd-ō-tāj-ə-nəs 'hēl-īŋ }

autogenous ignition temperature See ignition temperature. { 'd-ō-tāj-ə-nəs ig'nish-ən 'tem-prə-čər }

autogenous insect [INV ZOO] Any insect in which adult females can produce eggs without first feeding. { 'd-ō-tāj-ə-nəs 'in-sekt }

autogenous mill See autogenous tumbling mill. { 'd-ō-tāj-ə-nəs 'mīl }

autogenous tumbling mill [MECH ENG] A type of ball-mill grinder utilizing as the grinding medium the coarse feed (incoming) material. Also known as autogenous mill. { 'd-ō-tāj-ə-nəs 'təm-blīŋ 'mīl }

autogenous vaccine [IMMUNOL] A vaccine prepared from a culture of microorganisms taken directly from the infected person. { 'd-ō-tāj-ə-nəs 'vak-sēn }

autogenous volume change [MATER] The change in volume produced by continued hydration of cement, exclusive of effects of external forces or change of water content or temperature. { 'd-ō-tāj-ə-nəs 'vāl-yəm 'čāŋj }

autogenous welding [MET] A fusion welding process using heat without the addition of filler metal to join two pieces of the same metal. { 'd-ō-tāj-ə-nəs 'weld-īŋ }

autogeosyncline [GEOL] A paraegeosyncline that subsides as an elliptical basin or trough nearly without associated highlands. Also known as intracratonic basin. { 'd-ō-ōjē-ō'sīn,klin }

autogiro [AERO ENG] A type of aircraft which utilizes a rotating wing (rotor) to provide lift and a conventional engine-propeller combination to propel the vehicle through the air. { 'd-ō-ōjī-rō }

autograft See autotransplant. { 'd-ō-d-grāft }

autohemagglutination See autoagglutination. { 'd-ō-d-hēm-ə-glūt-ən-ā-shən }

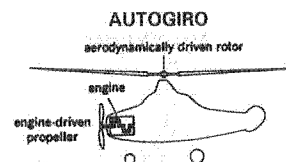
autohemolysis [PHYSIO] The spontaneous lysis of blood which occurs during an incubation in a hematological procedure. { 'd-ō-d-hə'māl-ə-səs }

autohemorrhage [INV ZOO] Voluntary exudation or ejection of nauseous or poisonous blood by certain insects as a defense against predators. { 'd-ō-d-hem-rīj }

autohemotherapy [MED] Treatment of disease with the patient's own blood, withdrawn by venipuncture and then injected intramuscularly. { 'd-ō-d-hēm-ə-ther-ə-pē }

autoicous [BOT] Having male and female organs on the same plant but on different branches. Also spelled autoecious. { 'ō'tōi-kəs }

autoignition [MECH ENG] Spontaneous ignition of some or all of the fuel-air mixture in the combustion chamber of an



The in-flight dynamic components of a typical autogiro.

only while the set is warming up; demagnetizes any parts of the receiver that have been affected by the magnetic field of the earth or of any nearby home appliance. { 'dɒ-ə-'mɑd-ik dɛ'gɑ:s-ər }

automatic dialer [ELECTR] A device in which a telephone number up to a maximum of 14 digits can be stored in a memory and then activated, directly into the line, by the caller's pressing a button. Also known as mechanical dialer. { 'dɒ-ə-'mɑd-ik dɪl-ər }

automatic dialog replacement studio See ADR studio. { 'dɒ-ə-'mɑd-ik dɪ-ə-læg rɪ'plɑ:s-mənt 'stü:d-ə-ð }

automatic dictionary [COMPUT SCI] Any table within a computer memory which establishes a one-to-one correspondence between two sets of characters. { 'dɒ-ə-'mɑd-ik dɪk-shə-nər-ē }

automatic direction finder [ELECTR] A direction finder that without manual manipulation indicates the direction of arrival of a radio signal. Abbreviated ADF. Also known as radio compass. { 'dɒ-ə-'mɑd-ik dɪ'rek-shən 'fɪnd-ər }

automatic door bottom [ENG] A movable plunger, in the form of a horizontal bar at the bottom of a door, which drops automatically when the door is closed, sealing the threshold and reducing noise transmission. Also known as automatic threshold closer. { 'dɒ-ə-'mɑd-ik 'dɔr-'bɒd-əm }

automatic drill [DES ENG] A straight brace for bits whose shank comprises a coarse-pitch screw sliding in a threaded tube with a handle at the end; the device is operated by pushing the handle. { 'dɒ-ə-'mɑd-ik 'drɪl }

automatic error correction [COMMUN] A technique, usually requiring the use of special codes or automatic retransmission, which detects and corrects errors occurring in transmission; the degree of correction depends upon coding and equipment configuration. { 'dɒ-ə-'mɑd-ik 'er-ər kə'rek-shən }

automatic exchange [ELECTR] A telephone, teletypewriter, or data-transmission exchange in which communication between subscribers is effected, without the intervention of an operator, by devices set in operation by the originating subscriber's instrument. Also known as automatic switching system; machine switching system. { 'dɒ-ə-'mɑd-ik iks'tʃənj }

automatic exposure [OPTICS] Photoelectric exposure control by a special device that maintains an essentially constant exposure in the focal plane for a given range of field luminance. { 'dɒ-ə-'mɑd-ik iks'pə-zhər }

automatic fillup shoe [PETRO ENG] A device, installed on the first joint of casing, that functions to regulate automatically the volume of mud in the casing. { 'dɒ-ə-'mɑd-ik 'fɪl-əp,shu }

automatic fine-tuning control [ELECTR] A circuit used in a color television receiver to maintain the correct oscillator frequency in the tuner for best color picture by compensating for drift and incorrect tuning. { 'dɒ-ə-'mɑd-ik 'fɪn 'tʊn-ɪŋ kən'trɒl }

automatic fire [ORD] Continuous fire from an automatic gun until the pressure on the trigger is released. { 'dɒ-ə-'mɑd-ik 'fɪr }

automatic fire pump [MECH ENG] A pump which provides the required water pressure in a fire standpipe or sprinkler system; when the water pressure in the system drops below a preselected value, a sensor causes the pump to start. { 'dɒ-ə-'mɑd-ik 'fɪr 'pʌmp }

automatic flushing system [CIV ENG] A water tank system which provides automatically for the periodic flushing of urinals or other plumbing fixtures, or of pipes having too small a slope to drain effectively. { 'dɒ-ə-'mɑd-ik 'flʌʃ-ɪŋ 'sɪs-təm }

automatic focus [OPTICS] A device in a camera or enlarger which automatically keeps the objective lens in focus through a range of magnification. { 'dɒ-ə-'mɑd-ik 'fə-kəs }

automatic frequency control [ELECTR] Abbreviated AFC. 1. A circuit used to maintain the frequency of an oscillator within specified limits, as in a transmitter. 2. A circuit used to keep a superheterodyne receiver tuned accurately to a given frequency by controlling its local oscillator, as in an FM receiver. 3. A circuit used in radar superheterodyne receivers to vary the local oscillator frequency so as to compensate for changes in the frequency of the received echo signal. 4. A circuit used in television receivers to make the frequency of a sweep oscillator correspond to the frequency of the synchronizing pulses in the received signal. { 'dɒ-ə-'mɑd-ik 'frɛ-kwən-sɛ kən'trɒl }

automatic gain control [ELECTR] A control circuit that automatically changes the gain (amplification) of a receiver or other piece of equipment so that the desired output signal remains essentially constant despite variations in input signal strength. Abbreviated AGC. { 'dɒ-ə-'mɑd-ik 'gæn kən'trɒl }

automatic grid bias See self-bias. { 'dɒ-ə-'mɑd-ik 'grɪd 'bi-əs }

automatic gun See automatic weapon. { 'dɒ-ə-'mɑd-ik 'gʌn }

automatic gun charger [ORD] A gun charger that includes a mechanism for the clearance of gun stoppages and for the retention of the breech mechanism to the rear of the gun receiver. { 'dɒ-ə-'mɑd-ik 'gʌn 'tʃɑrj-ər }

automatic head parking [COMPUT SCI] A feature that moves the read/write head of a hard disk over the landing zone whenever power is shut off to ensure against a head crash. { 'dɒ-ə-'mɑd-ik 'hed 'pɑrk-ɪŋ }

automatic horizon See artificial horizon. { 'dɒ-ə-'mɑd-ik hə'riz-ən }

automatic ignition [ENG] A device that lights the fuel in a gas burner when the gas-control valve is turned on. { 'dɒ-ə-'mɑd-ik ɪg'nɪʃ-ən }

automatic indexing [COMPUT SCI] Selection of key words from a document by computer for use as index entries. Also known as autoindexing. [CONT SYS] The procedure for determining the orientation and position of a workpiece with respect to an automatically controlled machine, such as a robot manipulator, that is to perform an operation on it. { 'dɒ-ə-'mɑd-ik 'ɪn-deks-ɪŋ }

automatic intercept [COMMUN] Telephone service that automatically records messages a caller may leave when the called party is away from his telephone. { 'dɒ-ə-'mɑd-ik 'ɪn-tər-sept }

automatic interrupt [COMPUT SCI] Interruption of a computer program brought about by a hardware device or executive program acting as a result of some event which has occurred independently of the interrupted program. { 'dɒ-ə-'mɑd-ik 'ɪn-tə-rʌpt }

automatic landing system [NAV] The means for automatically guiding and controlling aircraft from an initial approach altitude to a point where safe contact is made with the landing surface. { 'dɒ-ə-'mɑd-ik 'lænd-ɪŋ 'sɪs-təm }

automatic level compensation [COMMUN] System which automatically compensates for amplitude variations in a circuit. { 'dɒ-ə-'mɑd-ik 'lev-əl 'kəm-pen'sā-shən }

automatic level control [ELECTR] A circuit that keeps the output of a radio transmitter, tape recorder, or other device essentially constant, even in the presence of large changes in the input amplitude. Abbreviated ALC. [MECH ENG] In an automotive vehicle, a system in which two air-chamber shock absorbers in the rear are fed compressed air by an electric compressor; pressure in the air chambers is determined automatically by sensors to maintain the vehicle at a predetermined height regardless of load. { 'dɒ-ə-'mɑd-ik 'lev-əl kən'trɒl }

automatic light control [ELECTR] Automatic adjustment of illumination reaching a film, television camera, or other imaging device as a function of scene brightness. { 'dɒ-ə-'mɑd-ik 'lɪt kən'trɒl }

automatic mathematical translator [COMPUT SCI] An automatic-programming computer capable of receiving a mathematical equation from a remote input and returning an immediate solution. { 'dɒ-ə-'mɑd-ik 'mæθ-ə-'mɑd-ə-kəl 'tranz-lād-ər }

automatic message accounting [COMMUN] See automatic toll ticketing. { 'dɒ-ə-'mɑd-ik 'mes-ɪj ə'kaunt-ɪŋ }

automatic message-switching center [COMMUN] A center in which messages are automatically routed according to information in them. { 'dɒ-ə-'mɑd-ik 'mes-ɪj 'swɪtʃ-ɪŋ 'sen-tər }

automatic microfiller [ENG] A device used to place microfilm in jackets at relatively high speeds. { 'dɒ-ə-'mɑd-ik 'mɪk-rə-fɪl-ər }

automatic modulation control [ELECTR] A transmitter circuit that reduces the gain for excessively strong audio input signals without affecting the strength of normal signals, thereby permitting higher average modulation without overmodulation. Abbreviated AMC. { 'dɒ-ə-'mɑd-ik 'mɒd-ə-'lə-shən kən'trɒl }

automatic modulation limiting [COMMUN] A circuit that prevents overmodulation in some citizen-band radio transmitters by reducing the gain of one or more audio amplifier stages